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Robert G. Combs

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BROWN & MICHAELS, PC
400 M & T BANK BUILDING
118 NORTH TIOGA ST
ITHACA, NY 14850

EXAMINER

JONES, HEATHER RAE

ART UNIT

PAPER NUMBER

2481

NOTIFICATION DATE

DELIVERY MODE

10/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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brown@bpmlegal.com

Office Action Summary	Application No. 10/603,443	Applicant(s) COMBS, ROBERT G.	
	Examiner HEATHER R. JONES	Art Unit 2481	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 15-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 15-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed July 23, 2010 have been fully considered but they are not persuasive.

The Applicant argues that Laird et al. in view of Moran et al. and eventually further in view of Auty et al. fail to disclose a testing system as disclosed by the Applicant. The Examiner respectfully disagrees. While the Examiner read the Combs Declaration and understands what the invention is as a whole, the Examiner does not feel that the claims portray it. The claims do not recite that this system is a testing system to test whether or not the automated system is functioning properly or not. The only place that the word "testing system" is disclosed is in the preamble and is not referred to in the body of the claim and therefore, does not need to be given patentable weight. Furthermore, the claimed "testing system" is broad enough to be read on the Laird et al., Moran et al., and Auty et al. references because they are testing whether or not a violation has occurred. Therefore, Laird et al., Moran et al., and Auty et al. meet the claimed limitations and the rejection is maintained.

The Applicant argues that Laird et al. fails to disclose collecting serial communication messages within the traffic light system as well as sensing and collecting serial digital communication messages between subsystems. The Examiner respectfully disagrees. Several subsystems and components of the testing system can be seen in Fig. 5 of the Laird et al. reference that

communicates with one another. Furthermore, Laird et al. discloses in Fig. 5 both an Ethernet card and a DSL modem. DSL modems are well known in the art to connect to serial ports. Furthermore, computers that communicate over any network are inherently going to have some kind of serial port for sending/receiving messages (col. 8, lines 57-64). Laird et al. also discloses in Fig. 32 the receiving end of the messages along with all of the information being displayed to the user for review. Moreover, the Applicant's specification defines serial digital data as being data messages from computer or microprocessor-based sensors and peripherals that indicate various values, as well as sensor status. As can be seen in Fig. 32 the car's speed is given as well as time information and even though the car's speed is determined using images from the camera in the remote location only the final information is sent to the field office which can be seen here, which would include serial digital data as defined by the definition in the Applicant's specification. Therefore, Laird et al. meets the claimed limitations of collecting serial data and the rejection is maintained.

2. Applicant's arguments with respect to claims 22 and 23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-6, 15-21, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laird et al. (6,647,361) in view of Moran et al. (U.S. Patent 6,332,147).

Regarding claim 1, Laird et al. discloses a testing system for collecting, storing, and reviewing digital data, serial data, and video data related to events occurring in an automated system comprising a plurality of subsystems comprising an automated controller and at least one peripheral sensor under the direction of the automated controller, the testing system comprising: a) a digital signal capture card for sensing and collecting discrete digital signals from the automated system as digital data (Figs. 28 and 29 – memory fields 765, 767, and 803; col. 23, lines 62-64; col. 24, lines 3-5; col. 25, lines 16-17 – these memory fields indicate whether the car is a violator or non-violator and the current traffic light phase); b) a multi-port serial port expansion card for sensing and collecting digital communication messages between subsystems as serial data (Figs. 28 and 29; col. 23, line 46 – col. 25, line 6 – speeds and times are all collected and stored; the subsystems can be seen in Fig. 5); c) a video frame grabber and compression card for sensing and collecting video signals as video data (Figs. 28, 29, and 32); d) a device for indexing and storing the digital data, serial data, and video data with time tags (Figs. 28 and 29; the time tag can be seen in Fig. 32 in the section designated by reference character “820”), wherein said time tags are used for relating occurrence of a particular item of a particular data type,

whether digital data, serial data, or video data, to the most closely time-related data item from the other data types (Figs. 28, 29, and 32 – all data is stored accordingly and displayed together for review); and e) a display for control of the testing system and presentation of said digital data, serial data, and video data to a user during review (Fig. 32; col. 26, line 65 – col. 28, line 32). However, Laird et al. fails to disclose a display for control of said testing system and presentation of said digital data, serial data, and video data in separate windows on the display to a user during review; and wherein the display displays each data type, whether digital data, serial data, or video data, in a time-synchronized manner in the separate windows based on the time tags.

Referring to the Moran et al. reference, Moran et al. discloses a system for collecting, storing, and reviewing related digital data, serial data, and video wherein the presentation of said digital data, serial data, and video data is separate windows on the display to a user during review; and wherein the display displays each data type, whether digital data, serial data, or video data, in a time-synchronized manner in the separate windows based on the time tags (Fig. 4; col. 19; lines 1-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the digital data, serial data, and video data in separate windows on the display during review as well as being time-synchronized as disclosed by Moran et al. in the system disclosed by Laird et al.

in order to have provided the user with a simple interface that displays all linked material to the user at once.

Regarding claim **3**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1 including that the reviewed video data are presented in picture format of still image or time-motion video images on the display during review (Laird et al.: Fig. 32).

Regarding claim **4**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1 including that the reviewed serial communication data are presented in time-ordered message sequence (Laird et al.: Fig. 32 – details window (820) on the display during review; col. 27, lines 41-52).

Regarding claim **5**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1, including that the reviewed serial communication data are presented as recorded in hexadecimal or ASCII format during review (Laird et al.: Fig. 32 displays ASCII characters).

Regarding claim **6**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1 including that the reviewed serial communication data are translated according to message parsing rules during review (Laird et al.: Fig. 32 displays the time and information in the correct format – parsing is the process of analyzing a sequence of tokens (codes) to determine its grammatical structure with respect to a given formal grammar).

Regarding claim **15**, Laird et al. discloses a method of testing and evaluating an automated system comprising a plurality of subsystems comprising an automated controller and at least one peripheral sensor, the method comprising the steps of: a) operatively interconnecting a testing system to the automated system (Fig. 5); b) collecting discrete digital signals of the automated system generated during operation of the automated system as digital data with the testing system (Figs. 28 and 29 – memory fields 765, 767, and 803; col. 23, lines 62-64; col. 24, lines 3-5; and col. 25, lines 16-17 - these memory fields indicate whether the car is a violator or non-violator and the current traffic light phase); c) monitoring for serial digital communication messages between the subsystems generated during operation of the automated system with the testing system and collecting the serial communication messages as serial data (Figs. 28 and 29; col. 23, line 46-col. 25, line 6 - speeds and times are collected and stored; the subsystem can be seen in Fig. 5); d) collecting video images of the automated system during operation of the automated system as video data (Figs. 28, 29, and 32); e) indexing said digital data, serial data, and video data with time tags (Figs. 28 and 29); f) recording said digital data, serial data, and video data on a hard disk drive of the testing system; and g) displaying said digital data, serial data, and video data on a single display in a time- synchronized manner based on time tags (Figs. 28, 29, and 32 – all data is stored accordingly and displayed together for review). However, Laird et al. fails to disclose displaying

said digital data, serial data, and video data in separate windows on a single display in a time- synchronized manner based on time tags.

Referring to the Moran et al. reference, Moran et al. discloses a method for collecting, storing, and reviewing related digital data, serial data, and video wherein the presentation of said digital data, serial data, and video data is separate windows on the display to a user during review; and wherein the display displays each data type, whether digital data, serial data, or video data, in a time-synchronized manner in the separate windows based on the time tags (Fig. 4; col. 19; lines 1-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the digital data, serial data, and video data in separate windows on the display during review as well as being time-synchronized as disclosed by Moran et al. in the method disclosed by Laird et al. in order to have provided the user with a simple interface that displays all linked material to the user at once.

Regarding claim **16**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 15 including that wherein step d) comprises the sub-step of storing said digital data, serial data, and video data on a computer hard drive (Laird et al.: col. 30, lines 22-39 – hard drive).

Regarding claim **17**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 15 as well as the method further comprising the step of searching said digital data, serial data, and video

data for a particular event, a sequence of events, or a combination of events (Laird et al.: Fig. 32 - the person reviews the information (searches the information) to see if the cars were in violation of the traffic light).

Regarding claim **18**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 15 including that steps a), b), and c) occur simultaneously over a common time period (Laird et al.: Fig. 32 – all information is combined based on their time for the viewer to get an overall sense of what happened).

Regarding claim **20**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 15 including that wherein step b) comprises the substep of monitoring with the testing system for discrete digital signals of the peripheral sensor in parallel without affecting the automated system and collecting the discrete digital signals (Laird et al.: Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **21**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 15 including that the method further comprises the step of automatically slewing the separate windows of the remaining two data types to a display time selected by a user for one of the separate windows of any individual data type, whether digital data, serial data, or video data (Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claims **22** and **23**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 15, but fails to

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disclose that the method further comprises the step of regenerating the discrete digital signals from the digital data and supplying the discrete digital signals as inputs to the automated system in a format and a timing of an original sequence of events to simulate the original sequence of events; and the step of evaluating a response by the automated system to the inputs. Official Notice is taken that it is well-known in the art that by inputting the same inputs to the automated system as originally inputted one can simulate the previous results of the automated system and further evaluate the new results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the inputted the original data back into the automated system to further evaluate the new results in order for the user to ensure there was a violation and properly issue the citation.

Regarding claim **24**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1 including that when the user selects a display time of one of the separate windows of any individual data type, whether digital data, serial data, or video data, the separate windows of the remaining two data types are automatically slewed to the display time (Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **25**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1 including that the testing system monitors for the discrete digital signals of the automated system in

parallel without affecting the automated system (Laird et al.: Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **26**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1 including that the testing system accommodates various data modes of the digital data and the serial data in their original format to and from the automated system without modification of the automated system (Laird et al.: Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **27**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1 including that the testing system monitors an original signal of the digital data in parallel without affecting the automated system (Laird et al.: Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

5. Claims 2 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laird et al. in view of Moran et al. as applied to claims 1 and 15 above, and further in view of Auty et al. (U.S. Patent 5,809,161).

Regarding claim **2**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 1, but fails to disclose that the reviewed discrete digital data are presented in graphical strip chart format on the display during review.

Referring to the Auty et al. reference, Auty et al. discloses reviewing traffic information wherein the reviewed discrete digital data are presented in graphical strip chart format on the display during review (Fig. 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have graphically shown digital data as taught by Auty et al. in the system as disclosed by Laird et al. in view of Moran et al. in order to allow the reviewer to easily correlate related data visually.

Regarding claim **19**, Laird et al. in view of Moran et al. discloses all the limitations as previously discussed with respect to claim 15, but fails to explicitly disclose that the method further comprises the step of providing a status feedback to a system operator, wherein the status feedback comprises a duration of recording, a current state of said digital data, serial data, and video data, and a total number of state changes of said digital data, serial data, and video data.

Referring to the Auty et al. reference, Auty et al. discloses reviewing traffic information wherein the reviewed discrete digital data are presented in graphical strip chart format on the display during review which would provide the user with status feedback, wherein the status feedback comprises a duration of recording, a current state of said digital data, serial data, and video data, and a total number of state changes of said digital data, serial data, and video data (Fig. 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included status feedbacks to the user

as disclosed by Auty et al. in the system as disclosed by Laird et al. in view of Moran et al. in order to allow the reviewer to easily correlate related data visually.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEATHER R. JONES whose telephone number is (571)272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter-Anthony Pappas can be reached on 571-272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2482

Heather R Jones
Examiner
Art Unit 2481

HRJ
October 9, 2010